

**WHAT IS CLAIMED IS:**

1. A TO-CAN type optical module comprising:

a stem provided with optical components mounted on its upper surface and having a hole formed therethrough;

5 a plurality of pins electrically connected to the optical components via the hole, said plurality of pins including a signal-carrying pin protruding from the lower surface of said stem; and

a pair of ground pins spaced at both ends of a protruding portion of said signal-carrying pin by a predetermined interval.

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2. The optical module as set forth in claim 1, wherein the interior of the hole of said stem has a desired characteristic impedance by the impedance matching of a coaxial cable.

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3. The optical module as set forth in claim 1, wherein the lower surface of said stem has a desired characteristic impedance according to the dimensions of the protruding portion of said signal-carrying pin and said ground pins, and an interval between the protruding portion of said signal-carrying pin and said ground pins.

4. The optical module as set forth in claim 1, wherein said signal-carrying pin includes a cylindrical portion passing through said stem and a hexahedral portion protruding from the lower surface of said stem.

5. The optical module as set forth in claim 1, wherein the edges of said ground pins are partially removed if the interval between the protruding portion of said signal-carrying pin and said ground pins is smaller than the distance between signal lines and ground lines of a PCB for mounting the signal-carrying pin and the ground pins thereon.

6. The optical module as set forth in claim 4, wherein edges of said ground pins are partially removed so as to prevent the occurrence of shorts when said signal-carrying pins and said ground pins are connected to said signal lines and said ground lines.

7. The optical module as set forth in claim 1, wherein a ground property of the optical module is improved by increasing the dimensions of said ground pins.

8. The optical module as set forth in claim 1, wherein the optical components are one of a laser diode (LD) and a photo diode (PD).